

Remarks

Favorable reconsideration of this application, in view of the above amendments and in light of the following remarks and discussion, is respectfully requested.

Claims 17-40 are currently pending; Claims 1-16 having been canceled without prejudice or disclaimer, and new Claims 17-40 having been added, by way of the present response. Applicants respectfully assert that support for the changes to the claims is self-evident from the originally filed disclosure, including the original claims, and that therefore no new matter has been added.

In the outstanding Office Action, the disclosure was objected to because of informalities; Claims 6-8 and 14-16 were objected to under 37 C.F.R. § 1.75(c) as being in improper form; Claims 1-5 and 9-13 were rejected under 35 U.S.C. § 112, second paragraph; Claims 1, 2, 4, and 5 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,382,864 to Hashimoto et al. (Hashimoto); and Claims 1-5 and 9-13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hashimoto.

In the Office Action, the disclosure was objected to because of informalities. In response, Applicants have amended the specification to state “Figs. 8A and 8B,” and to remove the statement “as described in claims 1-8,” in accordance with the Examiner’s helpful suggestions. Thus, Applicants respectfully request that the objection to the specification be withdrawn.

In the Office Action, Claims 6-8 and 14-16 were objected to under 37 C.F.R. § 1.75(c) as being in improper form because a multiple dependent claim cannot serve as the basis for another multiple dependent claim. In response, Applicants respectfully assert that the rejection has been mooted by the cancellation of the claims without prejudice or disclaimer. Applicants respectfully assert that none of new Claims 17-40 multiply depends from another multiple dependent claim.

In the Office Action, Claims 1-5 and 9-13 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. In response, Applicants respectfully assert that the rejection has been mooted by the cancellation of the claims without prejudice or disclaimer. Applicants respectfully assert that none of new Claims 17-40 recites “such as” and “the midway.”

In the Office Action, Claims 1, 2, 4, and 5 were rejected under 35 U.S.C. § 102(b) as being anticipated by Hashimoto. Claims 1-5 and 9-13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hashimoto. Inasmuch as the original claims have been canceled without prejudice or disclaimer, Applicants respectfully assert that the rejections have been mooted. Applicants respectfully assert that the new Claims 17-40 are allowable for the below discussed reasons.

The present invention is directed to processes for treating sludge. Each of new independent Claims 17-19, 23-25, 29-31, and 35-37 recites, among other features, adding to sludge flowing in a sludge treatment line a flocculating agent to flocculate a material in the sludge. The sludge and the flocculating agent are shear-stirred by rotating a liquid shear-stirrer at a speed of 200 to 2,000 rpm prior to an initiation of flocculating reaction.

Hashimoto is directed to a process for dewatering sludge. The Office Action seems to concede that Hashimoto does not teach shear-stirring sludge and a flocculating agent,¹ as recited in new independent Claims 17-19, 23-25, 29-31, and 35-37.

Specifically, independent Claims 17-19 recite “shear-stirring the sludge and the flocculating agent by rotating the liquid shear-stirrer at a speed of 200 to 2,000 rpm.” Independent Claims 23-25 and 29-31 recite “shear-stirring the sludge and the first flocculating agent by rotating the liquid shear-stirrer at a speed of 200 to 2,000 rpm.”

¹ Page 3, second paragraph, of the Office Action.

Independent Claims 35-37 recite “shear-stirring the sludge and the flocculating agents by rotating the liquid shear-stirrers . . . at a speed of 200 to 2,000 rpm.”

The Office Action continues, however, asserting that “intense agitating utilized in Hashimoto is considered patentably indistinguishable” from shear-stirring sludge and a flocculating agent. (Underlining added). Applicants respectfully traverse this assertion for the following reasons.

Applicants respectfully assert that pursuant to MPEP § 2143.03, “[t]o establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught of suggested by the prior art.” In this case, Applicants respectfully assert that the Office Action has failed to establish that the asserted simple “agitation” of Hashimoto suggests shear-stirring (i.e., shearing and stirring) sludge and a flocculating agent.

Applicants further respectfully assert that the claimed process for treating sludge recited in new independent Claims 17-19, 23-25, 29-31, and 35-37 provides advantages that are not provided by Hashimoto. Specifically, Applicants respectfully assert that shearing and stirring of sludge and a flocculating agent can disperse, diffuse, or distribute the flocculating agent in a fine particulate state throughout the sludge (such as in a sludge treatment line) and can form flocks in an efficient and economical manner. Applicants respectfully assert that such advantages are not provided by the simple “agitation” of Hashimoto.²

Figure 1 of the attachment shows an example of sludge flocculated by a process such as that shown in Hashimoto. As shown in the figure, the flocks are formed in a fibrous state. Figures 2, 3, and 4, however, show flocks formed in accordance with features of the claimed invention. Specifically, Figure 2 shows a flocks formed in a particulate state, while Figures 3 and 4 show aggregate structure type and in a block state, respectively. Applicants

² Please see, in part, from page 2, line 13 to page 3, line 14; and from page 26, line 15 to page 30, line 10, of Applicants’ originally filed specification.

respectfully assert that the flocks shown in Figures 2-4 can include the above-discussed advantages.

Thus, for the above reasons, Applicants respectfully assert that Hashimoto does not teach or suggest the claimed features recited in new independent Claims 17-19, 23-25, 29-31, and 35-37. Therefore, Applicants respectfully request the allowance of new independent Claims 17-19, 23-25, 29-31, and 35-37.

Applicants respectfully assert that new dependent Claims 20-22, 26-28, 32-34, and 38-40 are allowable for the same reasons as new independent Claims 17-19, 23-25, 29-31, and 35-37, from which they respectively depend, as well as for their own features. Thus, Applicants respectfully request the allowance of new dependent claims 20-22, 26-28, 32-34, and 38-40.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal Allowance. A Notice of Allowance for Claims 17-40 is earnestly solicited.

Application No. 10/067,308
Reply to Office Action of October 16, 2003

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact the undersigned representative at the below listed telephone number.

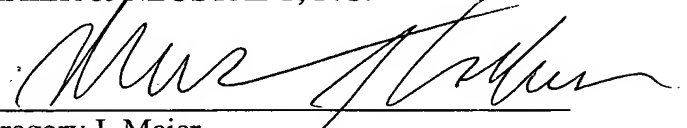
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